

**Historic, Archive Document**

Do not assume content reflects current  
scientific knowledge, policies, or practices.



AUGUST 1, 1966

WHY THE WORLD NEEDS MORE  
FERTILIZER—AND HOW MUCH

MARKET FOR U.S. COTTON  
IN FIVE FAR EAST COUNTRIES



# FOREIGN AGRICULTURE

Including FOREIGN CROPS AND MARKETS

A WEEKLY MAGAZINE OF THE UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREIGN AGRICULTURAL SERVICE

# FOREIGN AGRICULTURE

Including FOREIGN CROPS AND MARKETS

AUGUST 1, 1966

VOLUME IV • NUMBER 31



Indian extension official uses a flip chart to show farmers recommended fertilizer dosages. As article on opposite page states, most of the soils in less developed countries are low in the needed plant nutrients.

## Contents

- 3 Why the World Needs More Fertilizer—and How Much
- 6 Spain Moves To Increase Domestic Production of Feedgrains
- 6 Germans Get Good Results From New Grain Preservation Method
- 7 El Salvador and Nicaragua Hold Promise as U.S. Markets
- 7 Publication Out on World Beef Trends
- 8 Irrigation Dams Put World Bank Funds to Work
- 10 The Market for U.S. Cotton in Five Far Eastern Countries
- 11 Governor Hughes Tells How Trade Missions “Sell Iowa”
- 11 Eight-State Food Exhibit Planned for Munich
- 12 Over 3,300 European Stores Will Feature U.S. Foods This Fall
- 12 Ireland Considers Purchases of U.S. Angus
- 13-15 World Crops and Markets (Commodity index on page 15)
- 16 Highlights of the Agriculture and Trade of Czechoslovakia

Orville L. Freeman, Secretary of Agriculture

Dorothy H. Jacobson, Assistant Secretary for International Affairs

Raymond A. Ioanes, Administrator, Foreign Agricultural Service

Editor: Alice Fray Nelson

Associate Editors: Ruth A. Oviatt, Janet F. Beal

### Advisory Board:

W. A. Minor, Chairman; Donald K. Childers, Horace J. Davis, John H. Dean, David L. Hume, Robert O. Link, Kenneth W. Olson, Donald M. Rubel, Quentin M. West.

This magazine is published as a public service, and its contents may be reprinted freely. Use of commercial and trade names in the magazine does not imply approval or constitute endorsement by the Department of Agriculture or the Foreign Agricultural Service.

Foreign Agriculture is published weekly by the Foreign Agricultural Service, United States Department of Agriculture, Washington, D. C. 20250. Use of funds for printing this publication has been approved by the Director of the Bureau of the Budget (December 22, 1962). Yearly subscription rate is \$7.00, domestic, \$9.25 foreign; single copies are 20 cents. Orders should be sent to the Superintendent of Documents, Government Printing Office, Washington, D. C. 20401

# Why the World Needs More Fertilizer—and How Much

*To increase food supplies  
the less developed countries  
will have to give fertilizer  
production top priority  
in their agricultural planning.*

By F. W. PARKER, *Agency for International Development*  
L. B. NELSON, *Tennessee Valley Authority*

The increased use of fertilizers is one of the major methods of producing the additional food needed to feed the world's growing population.

One ton of plant nutrients, contained in 2 to 3 tons of fertilizer, will produce about 10 tons of cereals, enough to provide 2,400 calories per day to 40 people for a year. A fertilizer plant producing 1,000 tons of nutrients per day would therefore provide 2,400 calories per day for about 15 million people per year. The fertilizer plant would cost \$60 million-\$75 million, \$4 or \$5 per capita.

## When plant nutrients are low

Why are some fertilizers so important?

Most of the soils of the less developed countries are low to very low in one or more of the major plant nutrients. Their low fertility status results from their development un-

---

*This article is based on a paper presented at the Annual Meeting of the National Academy of Sciences, Washington, D.C., April 25, 1966. Proceedings of this meeting will be published in Volume 56 of the Academy's Journal.*

der high temperatures and rainfall, which promote rapid weathering and loss of nutrients by leaching. In addition, many of the arable soils have been cultivated a long time with only small additions of plant nutrients in farm manures.

The soils of India reflect these conditions. More than 300,000 soil tests made there indicate that 85 percent of the country's soils are low or medium in available nitrogen and phosphorus, and that 65 percent are low or medium in available potash. We would therefore expect a good response of crops to chemical fertilizer. That such is the case has been widely demonstrated in field experiments, fertilizer demonstrations, and in farm practice in all regions of the world and in most of the less developed countries.

The Food and Agriculture Organization of the United Nations (FAO) has summarized fertilizer response data for rice in nine countries of Asia and Africa. They show a good response to nitrogen in all countries, with an average return of 7.7 kilograms of rice per kilogram of nitrogen when applied at a rate of 30 kilograms per hectare. Seven countries had a good response to phosphate, with 6.9 kilograms of rice per kilogram of phosphate. Four countries had moderate average return to potash, with 3.7 kilograms of rice per kilogram of potash.

A second FAO report provides an economic summary of 15,000 fertilizer demonstrations and 2,000 field experiments conducted on farms in 16 countries of the Near East, West Africa, and northern Latin America in 1961-62 and 1963-64. A positive economic return was secured in 90 percent of the demonstrations and 97 percent of the experiments. The average crop value-fertilizer cost ratio for the best treatment in the demonstrations was 3.4 and for the experiments, 8.7. These rather high ratios reflect very favorable returns on vegetable crops; the average return on cereals was substantially lower.

Syrian farmers attend field day on fertilizer use.



### Package program best

Research and farmer experience in the less developed countries have shown that best returns are obtained only when fertilizers are used along with improved crop varieties, pest control, and adequate soil moisture. Nevertheless, there is ample evidence that properly selected single practices, such as good seed, fertilizer, or other measures often give satisfactory physical and economic returns on a wide range of soils and crops in the less developed countries.

The following conclusions can be drawn from the agronomic data that have been developed in the last 15 years.

- Plant nutrients are the major limiting factor in agricultural production in the less developed countries.
- A moderate rate of fertilization, 40 to 70 kilograms per hectare, will usually increase the yield of crops about 50 percent.
- The response to fertilizer may be increased at least 50 percent when it is used with improved varieties of crops, pest control, and good soil and water management practices.
- High levels of fertilization, 100-300 kilograms per hectare, and high yields are only possible when the fertilizer is used on crops bred for use at high levels of fertility and disease and insect resistance.
- Fertilizers can be used as effectively in the less developed countries as in North America and Europe.

### World fertilizer needs estimated

What are the fertilizer requirements of the less developed countries today and in 1975?

World fertilizer consumption increased from 3.5 million tons of nutrients in 1920 to 9.6 million in 1947, and 40.0 million tons in 1965. The annual rate of increase in consumption was 5.1 percent compounded in 1920-39, 8.0 percent in 1947-63, and 10 percent in the last 3 years.

In 1964 about 89 percent of the world fertilizer was used in the more developed countries and only 11 percent in the less developed countries. However, the proportion is changing as the rate of increase in consumption in the less developed countries is higher than in the more developed.

Both the TVA and the United Nations reports, however, indicate that fertilizer production in the less developed countries will be below the estimated consumption. Obviously then, there is a need to increase production in many of the developing countries, and this should be given priority in their agricultural programs.

### New technology important

How are the fertilizer requirements of the less developed countries to be met?

The unprecedented boom in fertilizer production and use is being accompanied by great technological changes in production, transportation, and marketing. The process starts with the development of new sources of raw material. For the production of nitrogen, phosphate, and potash fertilizers these are being discovered and developed at a rate adequate to meet foreseeable requirements.

The remarkable changes in the technology of ammonia production have substantially lowered the cost of production. There have been improvements in the urea process and in the production of ammonium phosphates, nitrophosphates, and complex fertilizers. These changes are well summarized in the report of the United Nations Fertilizer Seminar.



*Harvesting wheat crop on fertilizer demonstration site in Morocco, sponsored by Food and Agriculture Organization.*

Several authorities (see references) have recently estimated world fertilizer consumption for 1970, and their estimates, which include Mainland China, range from 58 million to 68 million tons of nutrients, with three of the four estimates near the higher figure. By 1970 the less developed countries will be using about 13 million tons, or 20 percent of the world's fertilizer supply. This is almost twice the percentage used in 1964.

Also, one of the large U.S. mineral and chemical companies estimates that world consumption in 1980 will be 113 million tons, with about 26 percent being used in the less developed countries.

That the governments and industry are planning for the higher estimated levels of consumption is indicated by a recent Tennessee Valley Authority study of world fertilizer production capacity. This study reveals that world capacity was 49.5 million tons in 1965—consumption was 40 million tons, so production averaged 80 percent of rated capacity—and would be 85.5 million tons in 1970, an increase of 72 percent. If operated at 80 percent capacity, world production will be 68.5 million tons, essentially the same as the higher estimates of 1970 consumption.

One effect of these and others changes in technology is the increased plant nutrient content of fertilizers, which has already occurred in most of the industrial countries. In the United States, for example, the average plant-food content of fertilizers increased from 22.1 percent in 1950 to 35.8 percent in 1964. The fertilizers in many less developed countries should average around 40 percent plant nutrients by 1970, thereby reducing transportation, storage, and handling costs per unit of plant nutrient almost 50 percent.

A second important effect of the new technology is on the price of fertilizers. The world price of fertilizers has changed very little since World War II. For example, since 1950 fertilizer prices in the United States have only increased 6 percent as contrasted with price increases of 46 and 59 percent for farm machinery and labor, respectively. The new technology of production and distribution



Rural youth clubs are active in El Salvador's fertilizer program. Country has doubled fertilizer use in 3 years.

should prevent price increases and may well reduce the price to farmers in some countries. On the other hand, the prices of agricultural commodities have increased and, in view of food and fiber shortages in the less developed countries, may continue to do so. Thus, fertilizer-crop value ratio and the economics of fertilizer use should improve.

#### A good marketing system essential

One of the weaker aspects of the fertilizer program in many less developed countries is the arrangement for marketing the fertilizers to farmers. In the early stages of fertilizer development, marketing is frequently done by a government agency. As domestic production develops and consumption increases, adjustments in marketing are needed. There are a number of alternatives that may be considered, as demonstrated by the various methods used in the United States, Western Europe, Japan, and some other countries.

A good marketing system should provide farmers with a source of fertilizers when and where they are needed. Obviously, provision must be made for warehousing so that deliveries may be made promptly.

Also, the system, through trained salesmen and retail agents, should provide an educational and technical service to farmers on such matters as the use of improved seed, fertilizers, and related practices. This will require men who will go to the farmers rather than waiting for farmers to come to them.

The fertilizer producer should be responsible for the sale of the product. Full-scale production would then depend on sales, and the producer would become familiar with the farmer's problems and the end-use of fertilizers. Furthermore, his marketing organization should work closely with the research, extension, and agricultural credit agencies. This organization may, in fact, handle part of the credit.

The retail agent for fertilizers is important too. If possible, he should sell not only fertilizer but seed, farm equipment, pesticides, and other farm supplies as well. And he should provide an educational and technical service to customers to supplement that provided by fertilizer producers and government agencies.

Several less developed countries are setting up good fertilizer marketing arrangements. Other countries could profitably study the methods used in Mexico, Taiwan, the Philippines, Pakistan, and some of the countries in Europe, as well as in the United States.

#### Government-industry cooperation

Since the use of fertilizers is effective in increasing crop yields and helping to solve the food problem and the marketing of them provides a way of giving farmers technical service, the governments of less developed countries should encourage both domestic and foreign industry to jointly undertake the production and sale of chemical fertilizers. And this can be done with a satisfactory return on the investment. Several countries are already doing it and seem to be benefiting by such policies and joint efforts.

There is abundant evidence to show that the chemical industries of the developed nations are quite willing to make investments in fertilizer production in the developing countries. In the last few years such investments have been made in more than 20 countries. Obviously, industry, in seeking places for such investment, is concerned with having a favorable climate for investment, sources of raw materials, a demand for fertilizers, good marketing arrangements, and a minimum of price controls. Industry prefers to operate in countries where market forces, rather than government controls, dominate.

If the most is to be made of current opportunities, the governments of the developing countries and industry, domestic and foreign, should work together. In that way, they can achieve their respective objectives as well as the common goal of increased food production and economic development. Furthermore, they can count on the assistance of the many agencies that provide technical and economic assistance.

## References

- Coleman, Russell, "Projected Use of Plant Nutrients," presented at Conference on Changes in Fertilizer Distribution and Marketing, Tennessee Valley Authority, Muscle Shoals, Alabama, 1965.
- Datta, N. P. and Khera, M. S., "Soil Testing Services for Better Agricultural Programming in India," published in *Fertilizer News* (ECAFE Conference Special No.), November 1963, pp. 19-25.
- Ewell, Raymond, "World Production, Consumption and International Trade in Fertilizers," 18th Annual Midwest Fertilizer Conference, Chicago, Illinois, February 17, 1966.
- Food and Agriculture Organization, Division of Statistics, "Statistics of Crop Responses from Fertilizer 1965," Rome, 1965.
- Food and Agriculture Organization, Economic Summary of Trial and Demonstration Results, 1961/62-1963/64, 10th Meeting of the Fertilizer Industry Advisory Panel, January 1966.
- International Minerals and Chemicals Corporation, Skokie, Illinois, "Fertilizer: A New Era of Growth" and a personal communication.
- McCune, Donald L., Hignett, Travis P., Douglas, John R., Jr., "Estimated World Fertilizer Production Capacity as Related to Future Needs," Tennessee Valley Authority, National Fertilizer Development Center, Muscle Shoals, Alabama, February 1966.
- United Nations, "Report on the Inter-Regional Seminar on the Production of Fertilizers," held at Kiev, Ukrainian S.S.R. from 24 August to 11 September 1965.

# Spain Moves To Increase Domestic Production of Feedgrains

Spain's new grain regulations—published June 2, 1966, in the *Spanish Official Bulletin*—hold strong inducement for increases in the country's feedgrain production. Among the regulations' features: higher support prices for both 1966-67 and 1967-68 feedgrain crops, more production subsidies, and more credit available to producer cooperatives.

Feedgrain getting the biggest initial boost is oats, for which the 1966-67 support price will be up some 27.5 percent from the 1965-66 level, and the 1967-68 support, up another 2.8 percent. These moves will bring payments for oats more in line with those for other feedgrains; also, these moves should help curb the downward trend that has been taking place in production of this commodity.

SPANISH SUPPORT PRICES FOR RYE AND  
FEEDGRAINS

Item	1965-66	1966-67	1967-68
	Dol. per bushel	Dol. per bushel	Dol. per bushel
Rye .....	1.85	2.10	2.15
Corn .....	1.82	2.03	2.10
Grain sorghums .....	1.77	2.00	2.05
Barley .....	1.45	1.72	1.76
Oats .....	.84	1.07	1.10

Smallest initial and largest secondary increases are being made in corn—up some 11.5 percent in 1966-67 and 3.4 percent in the succeeding year.

In addition, producers' associations are being offered subsidies and preferential credit arrangements for the purchase of fertilizers, seeds, machinery, and initial installation expense. The subsidies are designed to speed farm

consolidation and farmer cooperation—changes necessary if agriculture in this country of extremely small-size farms is to become more efficient.

Support prices for wheat, on the other hand, are the same as those applied to the 1964-65 and 1965-66 crops, varying from \$2.71 per bushel to \$3.27.

The National Wheat Service will pay premiums on wheat stored on farms between the months of November and April. These will range from a low of 2.2 U.S. cents per bushel to a high of 8.1 cents compared with 1.1 cents to 5.7 cents in the previous season.

## Better supply balance

Major purpose of the new regulations is to bring Spanish grain supplies into better balance—that is to stop the growth in surpluses of soft wheat and in deficits of the much-needed feedgrains.

This year, the country is expected to produce its largest wheat crop in a century—estimated at some 187 million bushels compared with the usual 158 million bushels or less; carryover will be high—around a million tons of soft wheat—because of the problems of exporting this type of general low-quality wheat.

Feedgrain imports, by contrast, hit around 2 million metric tons last year compared with a little over 100,000 5 years earlier. As in the past, around half came from the United States.

It is difficult now to assess the impact of these regulations on Spain's future feedgrain trade; however, the general feeling is that increased feed requirements of the expanding livestock industry will at least partly offset gains in domestic feedgrain production.

# Germans Get Good Results From New Grain Preservation Method

A procedure of preserving grain with dry, cool air was used on a large scale for West Germany's 1965 grain crop and appears to have had good success.

The method was developed for grain with high water content by the Institute of Agricultural Engineering of the Bonn University, in close cooperation with the Federal Research Institute for Grain Processing, Detmold, and the Institute for Agricultural Botany, Bonn. Basic research was completed in 1963, and use of the method—in units called "granifrigors"—began in 1964.

During 1964, specialists proved that grain with the critical moisture content of 17 percent could be stored indefinitely after cooling in "granifrigors" without losses or artificial drying, and that grain with a content of 18.5 percent could be stored without any risk, at 10°C. for 40 days and at 5°C. for up to 80 days.

## Highly useful in 1965

It was last year, however, that the real test came. High moisture content led to processing of about 100,000 metric tons of the 1965 crop in a total of 46 "granifrigor" units. The procedure showed definite benefits in all types of grain handling. Quality was good; there were fewer losses from high temperature or moisture, and shrinkage in stor-

age was reduced. Furthermore, upkeep of the equipment proved inexpensive as the units worked for 3 months straight without any care.

Because of the extremely wet weather conditions often prevailing during their harvest season, West Germany and other European nations frequently end up with crops excessively high in moisture. However, this problem is not limited to the Continent.

## High moisture in U.S. corn

In the United States, for instance, corn harvested by combine has a moisture content too high for safe storage and handling and must be artificially dried on the farm or in commercial facilities.

Consideration has been given to using "chilled" storage in this country in order to prevent bottlenecks during the harvest period when large volumes of the corn are harvested during a relatively short time. Under "chilled" storage, corn with a moisture content about 18 percent (wet basis) would be cooled to a temperature 50° F. (10°C.) and held under these conditions until moved to a dryer or until disposed of otherwise.

To date, however, the United States has only a very few such storage facilities in actual use.

# El Salvador and Nicaragua Hold Promise as U.S. Markets

The outlook for sales of U.S. agricultural commodities to El Salvador and Nicaragua is good. Both countries are experiencing a rapid economic development, which, coupled with an expanding population, is expected to result in an increased demand for many U.S. agricultural products.

Foreign exchange reserves in both countries are at record levels, and access into the area for the principal products imported from the United States is not a major problem. Agricultural imports into both countries presently total around \$34 million a year, of which the United States accounts for about one-third.

Wheat is the main agricultural item imported into El Salvador and Nicaragua from the United States. During 1964 wheat imports into both countries totaled \$4.9 million, the United States accounting for 61 percent. According to data of the local flour mills, wheat imports in 1965 were 32 percent higher than the previous year, and the U.S. share of the market was 51 percent.

Wheat imports are expected to continue expanding at a rapid rate. Also, the U.S. share of the area's market should increase because of the recent more competitive position of U.S. wheat prices compared with Canadian.

## Strong demand for livestock

Sales of U.S. purebred livestock are booming. During 1964 both countries imported 755 head of registered cattle from the United States, and preliminary data indicate that 1965 imports exceeded 2,300 head. The outlook for the next few years is for a continued strong demand for U.S. breeding stock, since both countries are emphasizing livestock improvement in their development efforts and have received sizable loans for the purchase of registered livestock in the United States.

The outlook for the sales of U.S. pedigreed hogs to El Salvador is also promising. The Ministry of Agriculture plans to import 1,000 hogs from the United States during 1966, and in addition, many private purchases are being made. Should these initial imports prove successful, imports of U.S. hogs could expand markedly.

Nicaragua and El Salvador continue to be good cash markets for U.S. tallow. Their tallow imports during 1964 totaled 5,400 metric tons valued at \$1.1 million; over 96 percent of them were from the United States. Imports during 1965 are estimated at 6,800 metric tons, up 26 percent from 1964. The local soap and feed industries expect tallow imports to increase at a yearly rate of between 10 to 15 percent over the next few years.

During the past 2 years a significant feedgrain deficit has developed in the area, particularly in El Salvador. Corn imports (sorghum are minor) totaled 81,216 metric tons during 1964-65, an increase of 235 percent above 1963-64, and over 306 percent above the previous 5-year average; 1965-66 corn imports are estimated at 78,000 tons.

This corn deficit is a result of a relative stagnation in feedgrain production coupled with a rapidly expanding demand. Although most of the imports are being supplied by Honduras, during 1964-65 about 21,000 metric tons were imported from outside the Central American Common Market (CAFTA), and half of these came from the United States. In the current crop year 26,000 metric tons

of corn are expected to be imported from outside CAFTA. Some sales opportunities are expected for powdered milk, baby chicks, and hatching eggs during the next few years. Imports of processed fruits and vegetables and dairy and meat products will probably be limited, since duties on many of these items are extremely high. Also, some of them are being produced within CAFTA at a cheaper price than that at which they can be imported.

## Cotton only competitive item

The only commodity exported from Nicaragua and El Salvador which competes significantly with U.S. agricultural exports is cotton. Cotton production in both countries has been expanded rapidly, thanks to favorable prices and markets. Lint cotton exports during the 1961-65 period shot up from 273,000 bales to 805,000.

It now appears, however, that the boom in cotton production has come to a halt. In the current year (1965-66), the crop is forecast at 745,000 bales for the area, a decrease of 16 percent from last year. As for 1966-67, most observers believe production will be about the same as this year's short crop. The continued weakening of world cotton prices together with high local production costs is expected to force many cotton farmers to diversify into other crops.

—RICHARD A. SMITH

*U.S. Agricultural Attaché, San Salvador*

## Publication Out on World Beef Trends

Conditions are getting back to normal in world beef production and trade after 2 years of a topsy-turvy supply-demand situation. This and other facts on trends in and prospects for world beef industries are set forth in a recently published FAS report, *World Beef Trends*.\*

The report—which begins a new series of FAS publications on world beef production and trade—states that this year output is up in all major geographic areas of the world as are shipments by the major beef exporters, Argentina, Australia, and New Zealand. At the same time, growing demand for this "status product" is keeping export prices relatively strong.

In the United States, higher prices than in the previous 2 years are attracting more imports, but not enough to trigger the imposition of an import quota as prescribed under the Meat Import Act of August 1964.

This current trade and production picture contrasts with that in 1964 and 1965. In those years, Argentina—the major beef exporter—had to reduce production and exports of beef in order to rebuild herds, while Western Europe, the major importing region, was experiencing spiraling demand in the face of lower production. These forces, combined with depressed prices in the United States, prompted a significant diversion of Australian and New Zealand beef away from the United States to Europe; they also made possible the entry of token quantities of top-quality U.S. beef into Western Europe.

\* FAS-M-173. Copies may be obtained from Information Service Branch, Foreign Agricultural Service, Room 5918-S, U.S. Department of Agriculture, Washington, D.C. 20250.

*The high arch dam at right cuts across the Mulargia River, winding through the mountains of Italy. It was financed—along with dams built on the Flumendosa—with World Bank funds.*



## Irrigation Dams Put World Bank Funds to Work



*Left, worker on a hydraulic sluice seals rock foundations of the Geehi Dam built in southeastern Australia for irrigation and power.*

*Lower left, excavation for the Yuscay Canal in Peru; Below, Japanese housewife in newly irrigated Aichi region enjoys water from tap instead of handpump in foreground.*



Since the International Bank for Reconstruction and Development (popularly called the World Bank) first opened its doors in 1946, a total of \$10 billion in loans has gone to its 102 member countries for development projects. The Bank and its associate, the International Development Association (IDA), were created to provide and facilitate international investment in projects intended to increase production, raise living standards, and help bring about a better balance in world trade.

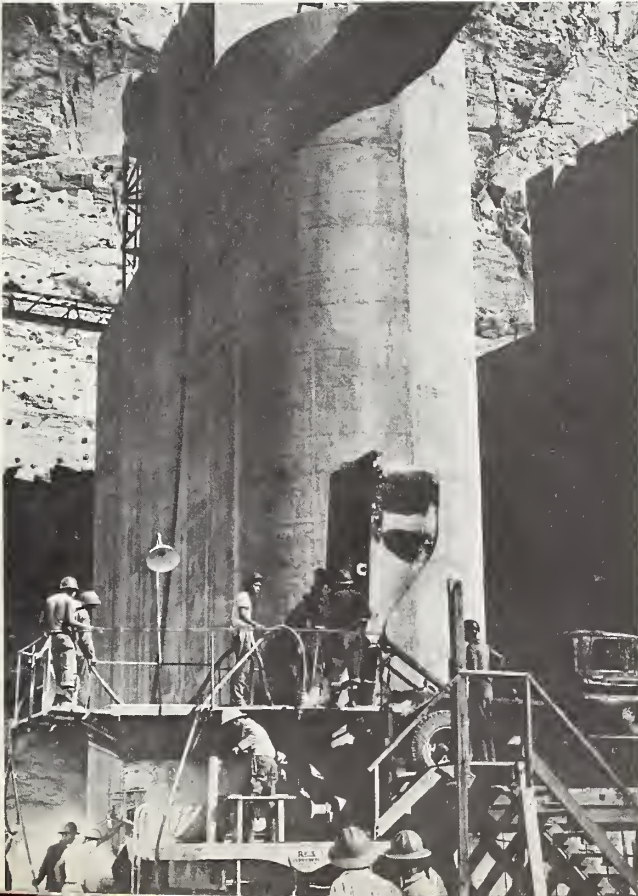
While the Bank has contributed to growth in all major economic sectors, there has been in recent years an emphasis on agriculture—irrigation in particular.

Agriculture employs more than two-thirds of the world's working population but accounts for less than one-third of the total value of output in the less developed countries as a whole. Useless expanses of dry wasteland and poorly watered farms account for much of this lack of production. Irrigation, however, can reclaim and make use of this land in many cases, and the Bank and IDA have invested heavily in water supply projects. Of the \$844 million loaned for agricultural projects in the past 19 years, 60 percent has gone for irrigation projects. Farm credit lending and imports of agricultural machinery account for the remainder.

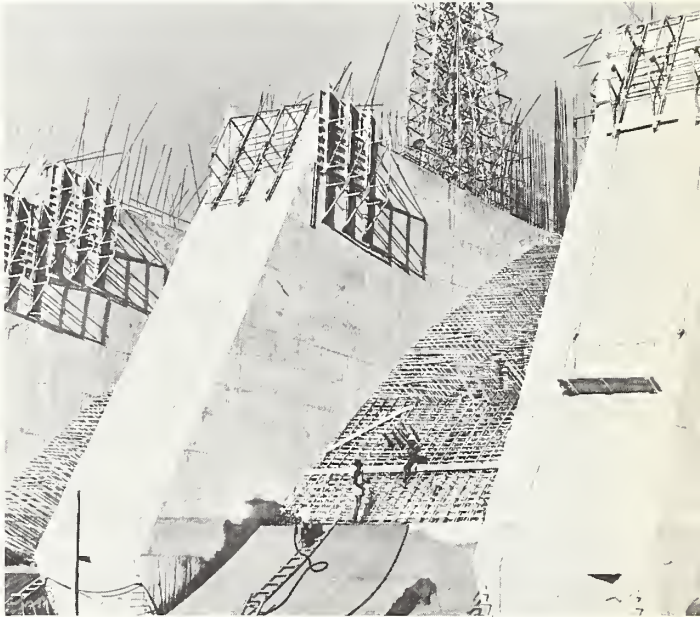
By the end of June 1965 the World Bank and IDA had invested \$499 million in 37 loans or credits to 16 countries to bring new or improved irrigation to more than 9 million acres and the benefits of flood control to a similar acreage. Largest amounts were loaned to Asia and the Middle East.

In many cases, agrarian reform is essential if investments in irrigation are to reap full benefit. Moreover, at the present time there is a shortage of irrigation projects ready and suitable for financing. As a result, the Bank is rapidly expanding its assistance to countries in their preparation of such projects.

*Below, Pumpcrete machine is installed at Bhumibol Dam of Thailand's Yanhee project—one of Bank's biggest in Asia.*



*Above, northbound river craft enter the Chainat Barrage navigation lock on the Chao Phya River which meanders through the fertile central plain of Thailand. The lock is part of an irrigation project World Bank helps to finance.*



*Water stored by the Roseires Dam, under construction above, will more than double the supplies available for irrigation in the Sudan during periods of shortage.*

# The Market for U.S. Cotton in Five Far Eastern Countries

Carl Campbell, *Cotton Council International* executive, returned recently from a market analysis tour of five Asian countries as part of the FAS-CCI market development program for cotton. Following are excerpts from his reports on the economies and cotton industries of Japan, Hong Kong, India, Thailand, and Pakistan.

## Japan—top U.S. dollar market for cotton

The Japanese economy is operating at a high level, but the rate of growth in gross national product in 1966-67 probably will not be as great as in some previous years. While the wholesale price index has remained relatively stable, advancing only 5 percent since 1960, the retail price index advanced 37.3 percent during the same period. On March 31, 1966, the retail price index was 7.4 percent higher than a year earlier.

Japan imported from the United States about 850,000 bales of its 3.2-million-bale cotton requirement in 1965-66, with Mexico and Central America the other major suppliers. Next year's imports are estimated at about the same level, but the U.S. share of the Japanese market should rise to about 1.1 million bales.

In 1966, Japan will export about 1.1 billion square yards of cotton fabric and perhaps as much as 18 million pounds of cotton yarn. Japan has had difficulty, however, in broadening its trade in textiles. Increasing competition from Communist China has counteracted efforts to build up textile trade with Africa and the Middle East, and attempts to increase exports of cotton fabric to Western Europe have met with little success.

Japan's textile industry will undergo some changes in the near future in an attempt to reach top efficiency. Two mergers of large textile firms are expected to be followed by more mergers, and factories now working on two shifts a day may add a third. In addition, some 2 million to 3 million spindles of the textile-spinning industry's 12.7 million will probably be scrapped.

## Hong-Kong—competitive market for low-grade U.S. cotton

Prospects for continued prosperity look good for Hong Kong, the United States second largest dollar cotton market in Asia. The tight money situation which restricted economic activity several months ago has eased up somewhat, tourist trade is booming, and exports have been going well.

Hong Kong's cotton imports in 1966-67 will be about 600,000 bales (500 lb. gross) the same as in 1965-66. About 35-40 percent of it may come from the United States compared with a 20-percent U.S. share in 1965-66. Low-grade American cotton is currently competitive in this market, but the situation might change when the new Brazilian crop begins to move. Some U.S. cotton has been sold to Hong Kong on Commodity Credit Corporation credit for delivery through December 1966.

Hong Kong's finishing industry has been expanded and improved considerably during the past year and now can process many special finishes. For durable press fabrics, the industry currently is finishing imported blends, mostly from Japan, since manufacturers apparently have had some trouble spinning blended yarns. The textile industry has

about 730,000 spindles and 21,000 looms, with expansion in looms expected in the future.

## India—smaller importer, faltering producer

On the surface, India's economy may appear to be advancing; construction is moving ahead in major cities and the standard of living seems to be getting better. However, India will require aid from other countries for some years to come. Besides having a severe food shortage, India has an economy which is undergoing substantial inflation, and a trade balance deficit of about \$1 billion annually.

Bad weather in 1965-66 added to India's problems by severely cutting agricultural production. The commercial cotton crop for 1965-66 has been estimated at 4.4 million bales—400,000 bales below last year's and almost 800,000 below that of 1963-64. Although India's total crop was down, production of Bengal Desi (short staple, harsh cotton) was up nearly 200,000 bales. Problems have arisen, however, since no big market currently exists for that variety. Since July 1965, India has bought 120,000 bales of Egyptian cotton, 75,000 bales of Sudanese, and 30,000 of Ugandan. The balance of the 1965-66 requirements (145,000 bales) came from the United States through barter and Title I of P.L. 480. Most of the American cotton purchased was extra-long staple and Upland.

Carryover on July 31, 1966, probably will be around 370,000 to 410,000 bales below the carryover on July 31, 1965; at least half the reduction will be in imported cottons.

The recession in India's textile industry seems to have bottomed out and demand is picking up. However, since food is more expensive and farm income has dropped, consumers will not have as much money to spend on textiles. India is making a strong effort to increase exports of textiles to both Western and Eastern Europe, and it is anticipated these efforts will meet with some success, particularly in Eastern Europe.

India's textile industry is trying to modernize its operation and recently built 8 or 10 new mills. However, the Indian Government's labor policies and difficulties in obtaining new equipment will make the rate of improvement slow.

Manmade fiber interests are trying to develop a market in India, even though consumer opinion shows synthetics are undesirable in India's climate. Various fibers are being promoted in the Indian market; some of these are produced locally and some are imported.

## Thailand—a good market for high-quality cotton

The economy of Thailand is sound and growing. Currency is stable, tourism is building, and balances of foreign exchange total over \$700 million. Recently, the government has been giving more attention to the development of agriculture, which provides 85 percent of the country's gross national product. Efforts are being concentrated on rural areas in the northeast which traditionally have been the poorest.

Thailand produced approximately 72,000 bales of cotton in 1965-66, but fewer than 45,000 bales were suitable for mill use. Consequently, Thailand imported about 80,000 bales in 1965-66, 60 percent from the United States.

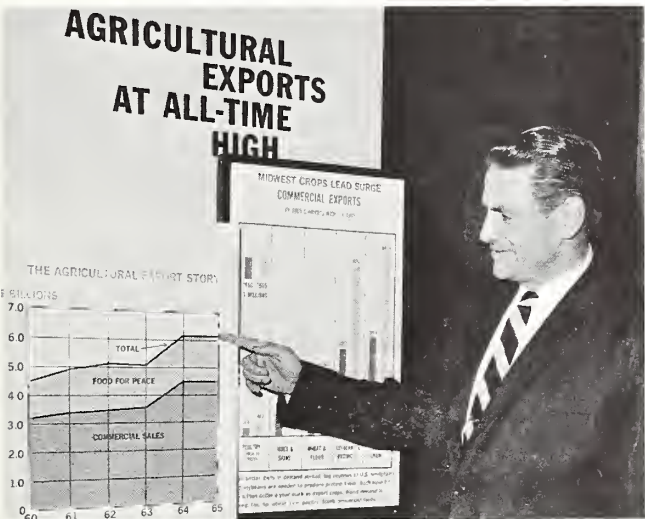
Next year, Thailand will need 100,000 bales and may buy about 75 percent from the United States. Thai mills buy from a number of sources but prefer American cotton when it can be bought at reasonable prices.

The Thai Government is encouraging increases in both production and quality of cotton, aiming toward self-sufficiency in all but longer staple, higher quality types. New irrigation schemes will be needed, however, if Thailand's dry areas are to be used for planting.

It is estimated that Thailand will import a total of 100 million yards of cotton fabrics in 1966. About half will come from Japan, still Thailand's biggest supplier of cotton fabrics even though Japanese exports to Thailand are now only half what they were in previous years.

Thailand's textile industry has approximately 220,000 cotton spindles operating, 3 shifts a day, 7 days a week. Some 40,000 spindles will be added by the end of 1966 and the industry is expected to level off at about that capacity for a few years. By the end of this year, Thailand is also expected to have doubled its number of spindles producing manmade fibers, bringing these up to a total of about 20,000.

## Governor Hughes Tells How Trade Missions "Sell Iowa"



Governor Hughes points to the previous \$6.1-billion level of exports U.S. farmers will top in 1966.

"You can't make sales without making calls, and if you want to make new sales, you need to open new territory." These are the basic sales axioms on which Iowa—according to Governor Harold E. Hughes—has based a vigorous and successful trade mission program to promote exports of State products.

Speaking at the Upper Midwest Conference on Agricultural Export Trade in Minnesota some weeks ago, Governor Hughes shared with delegates the profitable experience Iowa has had in sending State trade missions to foreign markets. The Governor cited voluntary trade missions as "proof that comparatively small businessmen and agricultural operators could engage profitably in foreign trade."

Iowa launched its first overseas trade mission in 1965, with a 90-member team of industrialists, bankers, and agriculturalists who went to France, Germany, the Netherlands, Italy, and Great Britain. This spring 88 Iowans went

### Pakistan—cotton exporter, market for extra-long staple

Pakistan's economy is growing at an annual rate of 4 or 5 percent—somewhat short of the 7.4-percent goal of the country's third 5-Year Plan (July 1, 1965-June 30, 1970).

The Pakistani Government has moved to expand exports and to severely restrict imports. In the meantime, Pakistan's balance of foreign exchange has reached approximately \$290 million. It appears, however, that Pakistan will continue to be a net importer of food despite improved agricultural practices and increasing acreage.

This year Pakistan's cotton production is expected to total 1.8 million bales—565,000 bales of it for export. So far Communist China has purchased around 100,000 bales, Hong Kong around 100,000, and Japan around 80,000. Increased yields and possibly a slight acreage increase will make the 1966-67 crop a little larger than the 1965-66 crop. For 1969-70 the goal is 2.9 million bales—some 2 million for local consumption and the remainder for export.

The United States is expected to be Pakistan's major source for yearly requirements of 5,000-10,000 bales of extra-long staple cotton.

to the Far East, and in November a group will go to South America. Team members have learned how to deal with exporters and in some instances have found direct outlets for byproducts that are difficult to sell in the United States. Others have discovered more economical methods of shipping, financing, and producing their own products.

"Unquestionably," Governor Hughes told the conference, "the most valuable dividend of the Iowa Trade Missions was the opening of our eyes to the proper place of foreign trade in the economic development of our States.

"In the sharpening competition with other States and other countries," the Governor said, "our most likely avenues of growth are the manufacturing and processing related to our vast food production and imaginative development of our exports."

## Eight-State Food Exhibit Planned for Munich

Marking an overseas food promotion "first," eight States will join with American food industry groups in the U.S. exhibit at the IKOFA (International Exhibition of Groceries and Fine Foods) at Munich, Germany, September 16-25.

States that will display their distinctive foods at Munich are Maine, New York, Pennsylvania, Illinois, Minnesota, Nebraska, and Louisiana.

In addition to foods displayed by the States, FAS in cooperation with U.S. trade groups will exhibit fruits, including citrus and dried raisins, canned and reconstituted fruit juices, vegetables, poultry, rice, dry edible beans, honey, peanuts, soya products, and a wide variety of canned and packaged specialty foods.

In line with the "Transportation" theme of the 1966 Munich show, American airlines serving Europe will have special exhibits of U.S. fruits, vegetables, flowers, and other products. The exhibit will also focus attention on truck, rail, and ocean transport of containerized shipments.

# Over 3,300 European Stores Will Feature U.S. Foods This Fall

U.S. processed foods will take the spotlight in 3,361 retail outlets in Belgium, the Netherlands, and West Germany this fall as 4 chain and department stores hold "American Weeks" at all their branches. The entire program is expected to reach nearly 6 million customers.

For these in-store promotions, the firms will purchase an additional 10 percent or more of their annual takings of U.S. processed foods. Shelves and special display areas will be stocked with items new to consumers as well as broader selections of the U.S. lines the participating stores already carry. Among the products featured will be canned soups, soup mixes, canned fruits and vegetables, fruit juices and concentrates, dried fruits, and possibly a variety of frozen items—just beginning to become popular among West European consumers.

FAS will provide the stores with point-of-sale publicity—posters, price cards, banners, and shopping bags—and will supply newspaper advertising over and above what the stores normally use. In some cases, especially in the larger stores, arrangements are being made for demonstrations and sampling, particularly of new and unusual items for which a market could develop. For these demonstrations, the stores are calling upon their suppliers for assistance.

## A proved method

Two years' experience with similar "American Food Fortnights" in the United Kingdom have proved these in-store promotions to be an inexpensive and highly effective means of gaining consumer acceptance of U.S. specialty foods.

First on the list of this fall's promotions is the Belgian firm of Delhaize Frères & Cie. LeLion, where a week-long program will begin September 29. One of Belgium's largest food chains, Delhaize owns 29 supermarkets throughout the country, 14 of which are in Brussels, and publishes a weekly paper which reaches 825,000 customers.

Delhaize's annual food purchases from the United States cover about 500 products for a wholesale value of \$5 million. Handling the program for the store is its commercial director, M. Van Ransbeck, who can be reached

at 53 Rue Osseghem, Brussels.

In the Netherlands, two firms will join forces in a 15-day program beginning October 1 to give U.S. foods maximum exposure throughout the country. Albert Heijn, NV, annual buyer of \$2 million (wholesale value) in American foods, has 322 retail food outlets and publishes a weekly newspaper with a circulation of 1.5 million. Its participation in this project is expected to result in additional purchases valued at a minimum of \$200,000.

## Specialty-shop promotion

At the same time, NV Magasijn de Bijenkorf Centrale will feature U.S. items in the specialty food shops at its three department stores in Amsterdam, Rotterdam, and The Hague. This firm's annual wholesale purchases of U.S. foods amount to about \$120,000, with additional purchases of at least \$42,000 expected for the "American Weeks."

U.S. suppliers interested in the Netherlands promotions can contact the head buyer of Bijenkorf's food department, G. F. H. Scharff, at Danrak 90a, Amsterdam, and Heijn's

manager of food purchases, C. Govers, at Westzieje 23, Zaandam.

The "American Weeks" in West Germany will reach out to consumers from the 3,000 KOMA (Koch & Mann GmbH) retail food stores November 15-30. These stores are located chiefly in the States of North Rhine-Westphalia and Rhinland-Pfalz, heavily populated areas containing about 35 percent of West Germany's population.

Founded in 1883, the KOMA firm has an integrated merchandising and promotion organization and sends its customer magazine to 350,000 patrons weekly. KOMA consistently handles a wide variety of U.S. foods, and purchases of these average about \$1.5 million annually. Dr. Jurgen Noth, KOMA's director of merchandising, can be contacted at Bayreuther Strasse 20, 56 Wuppertal-Elberfeld.

Additional information on these programs is available from the FAS International Trade Fairs Division, Washington, D.C., 20250, and the U.S. Agricultural Attachés at the American Embassies in Belgium, the Netherlands, and West Germany.

## Ireland Considers Purchases of U.S. Angus

Three officials from Ireland's Department of Agriculture and Fisheries, in the United States for the past 3 weeks to explore the possibility of importing American Angus breeding cattle, are currently on a similar week-long mission in Canada. Ireland has never imported Angus from either of these countries.

Seeking herds which it can recommend to breeders in Ireland, the team visited farms in New York, Maryland, and Missouri and conferred with officials of the American Angus Association, the Performance Registry International, and USDA. This week, it will inspect Canadian herds and confer with government authorities in Ottawa.

Of particular importance during the team's stay in Washington were meetings with veterinarians in the Animal Health Division of USDA's Agricultural Research Service to discuss health requirements of U.S. cattle that might be purchased for importation into Ireland. Irish regulations require that all breeding cattle imported be approved by its Department of Agriculture and

Fisheries. The visitors also spoke with ARS officials in charge of meat inspection.

This team will probably be the first of three to visit the United States and Canada for the purpose of importing Angus breeding cattle. Next will come Irish breeders interested in buying cattle, followed by another government group with authority to examine and approve cattle purchased by the breeders before they enter Ireland.

Members of the team are William Carlos, chief livestock officer; J. B. Caffrey, deputy director of veterinary services; and A. A. Mescal, agricultural inspector in the livestock division. Arrangements for their visit were handled by the Irish Embassy in Washington.

Although Ireland has never taken U.S. Angus breeding cattle, it did take some Polled Hereford, Charolais, and Charbray cattle a few years ago. Irish Angus breeders do not have their own herd book, and Irish Angus are registered in the Aberdeen-Angus Herd Book in Aberdeen Scotland.

## Argentine Farmers Increase Wheat Planting in Northern Zone

In the northern zone of the Argentine wheat belt a substantial increase in area planted to wheat this year is in prospect. The increase may be around 15 percent over the 1965-66 planted area. Sowing was expected to be completed by the end of July.

Clearly, price plays a major role in the farmer's decision on whether to plant wheat. In one locality it had been expected earlier that the wheat area this year would decline from last year. However, the announcement by the government that the current price for wheat would be adjusted at harvest time, based on increases in cost of production, had produced significant change in farmers' attitudes resulting in a likely increase in area.

A support price of around \$58.54 per metric ton for hard wheat was announced July 18, in contrast with the price of \$48.78 which had been announced last February and the \$40.00 level for the 1965-66 crop. The new support price for semihard is \$56.58 per ton compared with \$33.90 a year ago.

Dissatisfaction with the slowness of payments to farmers by the National Grain Board has led farmers in some cases to plant corn, which has a free market with immediate payment on delivery. On the whole, however, it appears that farmers believe they are going to receive a fairly

reasonable price for the crop that they will harvest later this year, and that this is the main factor encouraging them to comply with the government's request for larger plantings.

One of the evidences of increased planting is the unusually high demand for registered seed. In some areas there appears to be a problem with seed supplies, although it is anticipated that adequate distribution arrangements will be made.

The seed problem involves not only supplies, but in some cases the availability of funds or credit for purchase. Delay in paying the farmer for his wheat has been cited as one reason for the lack of financing for purchase of seed. Another is the lack of adequate credit facilities. Where credit is available, the term of payment is often short. These factors have caused the farmers in many cases to defer purchase of seed until the last minute, adding to the supply problem at that time. Government authorities are trying to alleviate the financing problem by soliciting cooperation of the banks in extending credit.

The prospective sizable increase in planting has caused some concern about storage and marketing for the potentially big harvest.

—JOSEPH C. DODSON

*U.S. Agricultural Attaché, Buenos Aires*

## Canada Plants Record Wheat Acreage

The record 29,780,000 acres planted to wheat in Canada's major wheat Provinces this year is 700,000 acres above the previous largest acreage of 1964. The Prairie Provinces—Alberta, Manitoba, and Saskatchewan—grow all but 2 percent of Canada's wheat.

As of July 20, crops generally were making good progress throughout wide areas of the Provinces. Rapid growth and good crop development resulted from warm weather and adequate moisture in most districts.

CANADA'S PLANTED WHEAT ACREAGE  
BY PROVINCES

Province	Average 1953-62	1963	1964	1965	1966
	Million acres	Million acres	Million acres	Million acres	Million acres
Alberta	5.54	5.94	6.50	6.05	6.60
Manitoba	2.48	3.15	3.38	3.24	3.48
Saskatchewan	15.51	17.91	19.20	18.50	19.70
Subtotal	23.53	27.00	29.08	27.79	29.78
Others	.69	.57	.61	.49	( <sup>1</sup> )
Total	24.22	27.57	19.69	28.28	( <sup>1</sup> )

<sup>1</sup> First estimate release date, August 5.  
Dominion Bureau of Statistics.

The 1966 acreage increased 1,990,000 acres over 1965 and is 6,098,000 acres, or 26 percent, larger than the average acreage during the 10 years ended 1963. A major portion of the increase came out of intended summerfallow.

Shifts in land use this spring were substantial. Farmers

adjusted cropping practices because of good reserve soil moisture at planting time and excellent market prospects. The area to be summerfallowed in 1966, at 24,800,000 acres, is 1,780,000 acres below last year and the smallest since 1956.

## France Forecasts Less Wheat, More Barley

The French July 1 wheat estimate places the 1966 crop at 465 million bushels (12.6 million metric tons). This estimate is 12 percent below the 1965 production. Barley is estimated at 355 million bushels (7.7 million tons), up 6 percent; oats at 169 million bushels (2.5 million tons), down 3 percent; and rye at 14.4 million bushels (366,000 tons), down 2 percent. French corn plantings total 2.3 million acres (944,200 hectares), 9 percent larger than in 1965.

Poor planting conditions last fall reduced winter grain acreages and resulted in larger area of all spring-planted crops. Farmers sharply increased spring barley seeding on land that could not be planted to winter grains. Weather so far in 1966 has been favorable indicating good yields.

## Japan To Harvest Less Wheat in 1966

Forecasts for Japan's wheat harvest this year have put the 1966 crop at about 1 million metric tons, 21 percent smaller than last year's.

The sharp drop in local production is attributed to an 11-percent cutback in acreage planted to wheat, for a total of 408,000 acres. Contract cultivation of domestic wheat

in Japan—tried in a few prefectures last year—was not considered successful enough to continue in 1966.

As a result of the lower production, Japan's imports of wheat are expected to increase by 310,000 metric tons to a 3.9-million total. However, if consumption of wheat products continues to increase at the anticipated rate of 4 percent, and if Japan's Ministry of Agriculture and Forestry does not deplete stocks, imports could be as high as 4 million metric tons. The United States had 54 percent of the market last year.

Japan's domestic wheat is of the soft, white variety used chiefly for making noodles, an increasingly popular wheat food with the Japanese. Western White wheat from the United States is the only imported variety which competes with Japan's domestic supply.

## Grain Sales Made by Ethiopian Corporation

The Ethiopian Grain Corporation announced that it had sold 35,000 tons of grain during the past year, including imports of 14,000 tons of durra from the Sudan and 20,000 tons of wheat from the United States and other countries. Additionally, 10,000 tons of wheat and flour were imported and sold to consumers at fairly low prices.

Present stocks amount to 15,000 tons of grains, enough to satisfy the country's needs for at least 3 months, according to the Corporation. The Corporation now owns 20 grain silos in Addis Ababa, each with a 500-ton capacity and costing about US\$22,000. Twenty more silos are under construction in Addis Ababa, and plans have been made to set up others in various parts of the country.

## New Irish Subsidies for Hogs and Sheep

New subsidies aimed at increasing sow numbers in Ireland are expected to halt the serious decline in hog numbers the country is experiencing at this time. It is likely, therefore, that feedgrain imports will be maintained during the next 3 years since 80 percent of feedgrain imports go to hog fattening.

New sheep subsidies may also stimulate increased demand for feedgrains, by encouraging an increase in supplementary grain feeding to sheep.

## Finland Reports on Crop Conditions

The annual report of the Finnish Board of Agriculture on crop conditions for the growing season ending June 15 states that temperature has been favorable or satisfactory in almost all parts of the country. Precipitation has been inadequate mainly in the coast area and also in some parts of central Finland. Farms suffering from low precipitation account for about 25 percent of all farms reviewed.

Conditions for wintering of winter cereals were very unfavorable in most parts of the country because of the long winter and heavy snow cover. Winter wheat suffered most, and in some southern areas as much as 20 to 30 percent of fields seeded with winter wheat had to be plowed up and reseeded. Rye and rape crops also suffered from the severe winter but not as seriously as wheat. On the other hand, hay fields and pastures were in rather good condition after the winter.

Because of the late spring, the beginning of seeding was delayed by 1 to 2 weeks from the normal time. Favorable

weather conditions in the first weeks of the growing season, however, have helped spring cereals, potatoes, and beets to develop rapidly. According to the Board of Agriculture's report, sprouts were better than average by mid-June.

June 15 crop conditions for 1965 and 1966 are compared in the following table (using the ratings 4 = good, 3 = average, and 2 = poor):

	1965	1966
Winter wheat .....	3.2	2.3
Rye .....	3.4	2.5
Rape .....	2.7	2.5
Hay .....	3.1	3.2
Spring cereals .....	2.7	3.6
Potatoes .....	2.7	3.3
Sugar beets .....	2.6	3.5

It is not yet possible to make any quantitative estimates on the 1966 crop. However, it is evident that the crop of winter grain in 1966 will be markedly smaller than that of 1965, because of winter damage.

The weather since the June 15 report has continued to be favorable—both temperature and precipitation have been satisfactory in most parts of the country. In spite of late seeding, plant development has been rapid, and it is even possible that harvesting will begin earlier than normal in some southern areas of the country. Haymaking had started everywhere in Finland by July, and, as a whole, a good crop can be expected.

## Philippine Exports of Copra, Coconut Oil

Registered exports of copra and coconut oil from the Philippine Republic during January-June 1966, oil-equivalent basis, totaled 421,942 long tons, 39 percent above the 304,156 tons registered in 1965. Exports of copra rose 40 percent and those of coconut oil, 36 percent.

### PHILIPPINE EXPORTS OF COPRA AND COCONUT OIL

Commodity and destination	June		January-June	
	1965	1966	1965	1966
Copra:	<i>Long tons</i>	<i>Long tons</i>	<i>Long tons</i>	<i>Long tons</i>
United States	24,360	19,298	133,577	138,499
Europe	47,780	51,825	168,443	265,579
South America	—	5,951	5,000	14,751
Japan	1,500	4,200	9,750	24,700
Middle East	—	1,630	1,500	2,155
Other Asia	—	—	500	—
Africa	—	1,300	—	1,300
Total	73,640	84,204	318,770	446,984
Coconut oil:				
United States	8,163	18,190	87,493	109,611
Europe	2,625	4,187	12,650	25,319
South Africa	—	440	—	942
Total	10,788	22,817	100,143	135,872

## Canada Reduces Flaxseed, Rapeseed Acreages

Canadian farmers in the Prairie Provinces have reduced this year's seedings to flaxseed and rapeseed by 10 and 3 percent, respectively, from acreage seeded in 1965, according to the Dominion Bureau of Statistics' June 1 survey, released July 13. About 97 percent of Canada's flaxseed area and all of its rapeseed area is in the Prairie Provinces.

Flaxseed area is estimated at 2,029,000 acres compared with the revised estimate of 2,265,000 acres in 1965 and the 10-year (1954-63) average of 2,153,800 acres. Declines

were registered in each of the Prairie Provinces.

Rapeseed area is placed at 1,388,000 acres compared with last year's record 1,435,000 acres and the 10-year average of 443,100 acres.

### U.S. Cotton Exports Lower in June

The United States exported 2,800,000 running bales of cotton in the first 11 months (August-June) of the current season, 26 percent below the 3,794,000 bales exported in the same months of 1964-65. Exports in June were 176,097 bales, compared with 397,767 in June of 1965. May exports were 214,000 bales.

U.S. COTTON EXPORTS BY DESTINATION [Running bales]					
Destination	Year beginning August 1				
	Average			August-June	
	1955-59	1963	1964	1964	1965
	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales
Austria	33	23	11	9	2
Belgium-Luxembourg	160	176	80	76	41
Bulgaria	0	19	0	0	0
Denmark	17	16	6	5	6
Finland	22	10	11	11	8
France	360	380	184	178	103
Germany, West	475	401	217	212	90
Hungary	0	18	0	0	0
Italy	416	442	260	255	101
Netherlands	124	127	65	64	38
Norway	10	14	13	13	10
Poland & Danzig	85	132	67	67	42
Portugal	28	35	22	21	6
Spain	171	14	28	19	10
Sweden	75	88	58	57	58
Switzerland	64	95	66	66	35
United Kingdom	525	286	153	141	127
Yugoslavia	108	78	109	108	123
Other Europe	17	20	10	10	11
Total Europe	2,690	2,374	1,360	1,312	811
Australia	54	91	60	58	32
Canada	217	448	390	371	259
Chile	35	2	1	1	3
Colombia	33	14	1	1	56
Cuba	27	0	0	0	0
Ethiopia	4	9	4	3	18
Hong Kong	134	187	150	140	90
India	184	314	243	209	61
Indonesia	30	21	47	47	( <sup>1</sup> )
Iraq	0	20	0	0	0
Israel	16	26	23	21	5
Japan	1,154	1,301	990	913	697
Korea, Rep. of	205	313	261	234	296
Morocco	10	15	12	12	12
Pakistan	14	8	9	9	6
Philippines	64	140	75	68	88
South Africa	26	37	43	42	27
Taiwan (Formosa)	153	189	203	188	169
Thailand	4	39	55	46	52
Uruguay	15	( <sup>1</sup> )	0	0	( <sup>1</sup> )
Venezuela	2	12	6	5	5
Vietnam <sup>2</sup>	2	75	63	54	47
Other countries	27	27	64	60	66
Total	5,100	5,662	4,060	3,794	2,800

<sup>1</sup> Less than 500 bales. <sup>2</sup> Indochina prior to 1958; includes Laos and Cambodia.

### Export-Import Bank Loan to Japan for Cotton

The Export-Import Bank of Washington, on July 11, signed a \$75,000,000 credit agreement with the Bank of Tokyo, Ltd., for the purpose of financing Japanese purchases of U.S. raw cotton during the crop year beginning August 1, 1966. Sales contracts entered into on or after April 1, 1966, for shipment after August 1 will be eligible. Purchases by Japanese textile mills will be financed by

12-month drafts drawn by the U.S. shippers on the Bank of Tokyo, Ltd., pursuant to letters of credit issued by U.S. commercial banks. Around 600,000 bales of U.S. cotton will be financed under the agreement.

### South Vietnam's Cigarette Output Up

Cigarette output in South Vietnam continued upward through 1965. Production last year amounted to 16.0 million pounds, compared with 11.9 million in 1964 and 10.9 million in 1963.

### Hungary's Cigarette Output Sets New Record

Hungary's cigarette output last year set a new record of 18.478 million pieces. This was 12.7 percent greater than the 1964 level of 16,393 million pieces and 10.0 percent above the previous high of 16,793 million in 1961.

### Mozambique Produces More Cigarettes

Mozambique's cigarette output during 1965 totaled 3.35 million pounds. This was 2.8 percent above the 1964 level of 3.26 million pounds but 1.8 percent below the high of 3.41 million in 1963.

### Malay States' Output of Tobacco Products Down

Output of tobacco products in the Malay States (formerly the Federation of Malaya) during 1965 totaled 16.8 million pounds—down slightly from the 17.2 million produced in 1964.

Cigarette output totaled 13.1 million pounds, or 3.3 percent below the 1964 high of 13.5 million. Production of cigars and cheroots was down slightly, whereas output of smoking mixtures was up a little.

Manufacturers' usings of leaf dropped to 19.0 million pounds from 19.6 million for 1964. Use of domestic leaf totaled 8.1 million pounds, compared with 8.3 million in 1964 and 7.4 million in 1963. Use of imported leaf dropped to 10.9 million pounds, compared with 11.3 million in 1964 and 11.0 million in 1963.

### WORLD CROPS AND MARKETS INDEX

#### Cotton

- 15 U.S. Cotton Exports Lower in June
- 15 Export-Import Bank Loan to Japan for Cotton

#### Fats, Oilseeds, and Oils

- 14 Philippine Exports of Copra, Coconut Oil
- 14 Canada Reduces Flaxseed, Rapeseed Acreages

#### Grains, Feeds, and Seeds

- 13 Argentine Farmers Increase Wheat Plantings in Northern Zone
- 13 Canada Plants Record Wheat Acreage
- 13 France Forecasts Less Wheat, More Barley
- 13 Japan to Harvest Less Wheat in 1966
- 14 Grain Sales Made by Ethiopian Corporation

#### Livestock and Meat Products

- 14 New Irish Subsidies for Hogs and Sheep

#### Tobacco

- 15 South Vietnam's Cigarette Output Up
- 15 Hungary's Cigarette Output Sets New Record
- 15 Mozambique Produces More Cigarettes
- 15 Malay States' Output of Tobacco Products Down

#### General

- 14 Finland Reports on Crop Conditions

OFFICIAL BUSINESS

To change your address or stop mailing,  
tear off this sheet and send to Foreign  
Agricultural Service, U.S. Dept. of Agriculture,  
Rm. 5918, Washington, D.C. 20250.

## Highlights of the Agriculture and Trade of Czechoslovakia

**Resources:**—Czechoslovakia is a landlocked country with an area of 49,369 square miles, about the size of New York. More than half the total area is agricultural land, of which 71 percent is arable, 25 percent pastures and meadows, and 4 percent permanent vineyards, hop fields, and other uses. Grains occupy half the sown area with the greatest share, about 16 percent, accounted for by wheat. Population in December 1965 was 14,194,000. The total labor force in 1964 was 6.4 million of which 1.2 million, or 19 percent, worked in agriculture.

**Agriculture:**—Mixed crops and livestock farming predominate. Chief grains are wheat, barley, rye, and oats. Potatoes and sugarbeets are the major root crops; rapeseed, flax, poppyseed, and tobacco are the major industrial crops. Livestock products account for about half of agricultural production, with pork, milk, and beef being most important in terms of value.

**Farm Structure:**—Before World War II almost all farms were privately owned. Since 1945, government-enforced socialization has been taking place. By 1964, only 10 percent of agricultural land remained in private farms, mostly in hilly parts of the country. In the socialized sector 29 percent of agricultural land was in state farms and 71 percent in collective farms.

**Agricultural Policy:**—Since complete socialization of agriculture, production has stagnated in Czechoslovakia. To stimulate production, control over agriculture has been relaxed slightly, prices for farm products have been raised, and mechanization and increased fertilizer consumption have been receiving more emphasis. Present plans call for higher priority to agriculture in the economy without any change in present structure.

**Farm Inputs:**—In 1964, there were approximately 96,000 tractors, with an average of 24 hp. per tractor, all in the socialized sector. Prior to 1959, most of the tractors were owned by the State Tractor Stations (STS). Since the completion of collectivization, the trend has been to switch ownership from STS to collective farms. In 1964, there

were some 131 acres of sown area per tractor. Fertilizer consumption amounted to 272 tons in 1963-64, or 117.7 pounds per acre of sown area—a rate second only to East Germany in Eastern Europe.

**Food Consumption Levels:**—Food consumption has increased over the prewar period with the greatest increase shown in the consumption of meat. Average daily caloric intake in 1963 of 3,120 was 22 percent above that of 2,545 in 1936. Meat consumption increased 74 percent, from 75 pounds per person in 1936 to 130 pounds in 1963. Grain consumption between 1936 and 1963 declined by only 1 percent. Although meat consumption increased, the share of caloric values from livestock products declined from 29 percent in 1936 to 27.5 percent in 1963.

**Foreign Trade:**—The foreign trade of Czechoslovakia amounted to U.S.\$5 billion (U.S. dollar = 7.20 crowns) in 1964, of which imports accounted for nearly 49 percent and exports for 51 percent. Of the total trade, 73 percent was with socialist countries. Of the trade with socialist countries, CEMA member countries accounted for 93 percent. The USSR, the major trade partner, accounted for nearly 55 percent. Agricultural commodities in 1964 accounted for 20 percent of all imports and 5 percent of all exports. Major agricultural imports are wheat, feedgrains, tobacco, fruits, vegetables, oilseeds, and cotton; sugar and hops are the major farm exports.

**Foreign Trade With the United States:**—U.S. trade with Czechoslovakia in 1965 totaled less than \$14 million or only one-half of 1 percent of imports and exports. United States exports to Czechoslovakia in recent years have been limited mainly to raw materials. Exports of hops, soybeans, and crude sulfur have been growing in importance in recent years. United States imports have consisted primarily of glass and glass products, costume jewelry, and cut stones. Limited amounts of machinery are also imported from Czechoslovakia.

—A. PAUL DANYLUK  
*Foreign Regional Analysis Division, ERS*